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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/526,930 | 03/16/2000 | Timothy M. Schmidt | TI-30734 | 1461 |

7590 07/16/2003
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EXAMINER

KIM, KEVIN

ART UNIT PAPER NUMBER

2634

DATE MAILED: 07/16/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

AM

Office Action Summary

Application No.

09/526,930

Applicant(s)

SCHMIDT ET AL.

Examiner

Kevin Y Kim

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 and 32-36 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,7,12-31 and 37-47 is/are rejected.
- 7) ☒ Claim(s) 3,5,23,39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

0DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,2,4,6,7,12-31,37-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Paulraj et al (US 6,377,632).

Consider claims 1, 12,18,24,28,29, Referring to Fig.1, Paulraj et al discloses a delay diversity transmission method between a base station, having a plurality of antennas (114), and at least one remote receiver (not shown); comprising the steps/means (150 in Fig.3) of deriving versions of a signal with selected phase shifts, providing the derived signals to the plurality of antennas after providing a distinct delay (Delay 1 – P) to each of the derived signals. See col. 4, line 65-67 and col.5, lines 55-60. In particular regarding claim 28, the controller (120) executes “an algorithmic software” using the channel measurement data stored in the characteristic extractor/ “a data storage unit” for the functions mentioned above.

Regarding claim 2, see col. 5, lines 6-11 teaching receiving a feedback/ “uplink” signal from a remote receiver to provide a measurement of the channel quality between the transmitter and receiver.

Regarding claims 4,15,16,17, 21,22,25-27,37,38,42 and 45, the amplitude and/or phase of the transmission signal are determined so that each channel will have a desired channel communication signal amplitude.

Regarding claims 6,7,13,14,19,20 ,30,31,40,41,43,44, 46 and 47 see col.9, lines 45-48 teaching the signal being associated with CDMA and TDMA.

Allowable Subject Matter

3. Claims 3,5,23,39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claims 8-11,32-36 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: No prior art has been found to disclose a multi-antenna transmitter where derived signals from each communication signal undergoes varying delays, i.e., delays determined based on uplink signals as well as phase shifts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y Kim whose telephone number is 703-305-4082. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

kvk
July 12, 2003


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600